

Claims

1. Method of connecting a metal fastening element to a metal workpiece, wherein the fastening element comprises a carrier, which carries a solder material, to which the carrier is connected in an electrically conductive manner, comprising the following process steps:

a. the solder material is introduced into an indentation in the carrier and provided with a convex contour directed towards the workpiece to be soldered;

b. a voltage is applied between the fastening element and the workpiece so an electrical arc between solder material and workpiece effects a selective melting-on of the solder material;

c. the fastening element is pressed against the workpiece.

2. Method according to claim 1, characterised in that striking of the arc is effected in that first the solder material and the workpiece are electrically short-circuited, then a voltage is applied between the fastening element and the workpiece and, finally, the fastening element and the workpiece are moved apart from one another with simultaneous formation of an arc.

3. Method according to claim 1, characterised in that, after the solder material has been melted on, first the voltage between the workpiece and the fastening element is disconnected and then the fastening element is pressed against the workpiece.

4. Method according to claim 1, characterised in that the distance of the fastening element relative to the workpiece is less than 4 mm.

5. Method according to claim 4, characterised in that by means of the arc a drop of solder material is formed, which wets the fastening element and the workpiece, and then the solder material is heated further during the short-circuit.
6. Fastening element to be soldered on a workpiece, having a carrier with an end, which is to be soldered on and comprises an indentation filled with a solder material, wherein the solder material has a contour, which is of a convex construction and directed towards the workpiece to be soldered.
7. Fastening element according to claim 6, characterised in that the fastening element is a stud.
8. Fastening element according to claim 6, characterised in that the fastening element is a nut.
9. Fastening element (1) according to claim 6, characterised in that the indentation is of an annular or cylindrical construction.
10. Fastening element according to claim 6, characterised in that the contour projects in a pyramidal manner.
11. Method according to claim 1, characterised in that an end of the carrier to be soldered on is provided with solder with the aid of a flow soldering technique.

12. Method according to claim 11, characterised in that the end provided with solder is then cold-worked and the solder material is provided with a convex contour directed towards the workpiece to be soldered.